



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,021

03/22/2006

David Kennett

P71178US0

2540

136 7590 11/28/2007

JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

LOW, LINDSAY M

ART UNIT

PAPER NUMBER

3721

MAIL DATE

DELIVERY MODE

11/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,021

Applicant(s)

KENNETT, DAVID

Examiner

Lindsay M. Low

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 34-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 8 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 0206 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/29/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The Information Disclosure Statement (IDS) submitted on June 29th, 2006 is acknowledged. The IDS meets the requirements of 37 CFR 1.97 and 1.98. Therefore, the references therein have been considered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 8, 9, 10, 21, 23, 25, 31, 35, 36, 39, 40, 42, 45, and 49.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the vehicle, vessel, or derrick from claims 22-26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be

Art Unit: 3721

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure is objected to because it contains claim language. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities: on page 8 line 6, the term "sensor" is spelled incorrectly. Appropriate correction is required.

8. Claims 1-3, 8-9, 14, 22-24, 26, and 38-39 fail to invoke 35 U.S.C. 112, sixth paragraph because the terms "reaction means," "a means", "ram bearing means," "control means," and "articulatable connection means" fail the first prong of the 3-prong analysis as stated in MPEP 2181, which includes:

- (1) the claim limitations must use the phrase "means for" or "step for;"
- (2) the "means for" or "step for" must be modified by functional language;
- (3) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function.

Claim Objections

9. Claims 8 and 39 are objected to because of the following informalities: regarding claim 8, it is unclear what is meant by "ram bearing means which locate said ram with said chassis." Regarding claim 39, it is unclear what is meant by "elongate object proximate more position." Appropriate correction is required.

10. It is noted that claims 32 and 33 are not listed in the amended claims dated February 22, 2006. It is unclear whether or not those claims have been cancelled. Hereinafter, it is assumed that claims 32 and 33 have been cancelled by the applicant and are thereby not examined.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-14, 16-21, 27, 34-35, 38, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacquemet (4,799,557).

Jacquemet discloses the same invention including a chassis 6, a ram 1, and a linear induction motor (LIM) 2 having a stator that interacts with LIM reaction means (the magnetic core of ram 1). The ram oscillates between a first limit being a retracted position and a second limit being an impact position. Note that the ram is accelerated by the stator from the first to second limit by the acceleration of gravity. The bottom portion of the ram 1 is an impact head that is made of a robust and solid material. The outer surface of the ram is considered to be a plate of conductive metal material. Ram bearing means is located within the chassis 6. Electronic sensors 11 and 26 measure the position of the ram with respect to the chassis via a control means as shown in Figs. 4-6. An anvil assembly holds an anvil 7 and is positioned between the head of elongate object 8 and the impact head. The anvil assembly is translatably engagable with the

Art Unit: 3721

chassis. Note that the portion 7b of the anvil 7 is remote from the chassis. The chassis 6 is mounted to a support structure 28, 30 (see col. 7 lines 4-8). Jacquemet's device extracts elongate objects 8 from a body by relying on the LIM 2 (see col. 6 lines 52-68 through col. 7 lines 1-10). Means 29 to engage the elongate object 8 is included for extraction purposes.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacquemet (4,799,557).

Jacquemet discloses the same invention substantially as claimed but is silent about the overall operational height of the impact driver being less than 3m, 2.5m, 2m, and 1.5m. However, the examiner takes Official Notice that is well known to form devices with sufficient lengths and heights so as to facilitate use of the device. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to form Jacquemet's pile driver at a sufficient height so as to facilitate use of the device.

15. Claims 1-17, 19-21, 27-31 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (4,844,661) in view of Rice (4,390, 307).

Martin discloses the same invention including a chassis 1, a ram 3, and electromagnetic means 2 to allow the ram 3 to oscillate between a first limit being a retracted position and a second limit being an impact position. The ram is accelerated by the interaction between electromagnet 2 and reaction means 3d from the first limit to the second limit at a rate that is greater than from the impact position to the retracted position and greater than the acceleration of gravity (see abstract). The bottom portion 3a of the ram is an impact head that is made of a robust and solid material. Reaction means 3d is a plate of conductive material. Ram bearing means is located within the chassis 1. Electronic sensors allow positioning of the ram to be detected via control means (see Fig. 12 and col. 6 lines 3-53). An anvil assembly holds an anvil 4 and is positioned between the head of elongate object 6 and the impact head 3a. The anvil assembly is translatably engagable with the chassis and its support structure 1d-1g. Note that Martin's device is capable of being a pile driver (see col. 1 lines 10-15).

Martin fails to disclose a linear induction motor for accelerating the ram. However, Rice teaches a pile driving device that uses a linear induction motor (LIM) with a stator 34 to drive piles for the purpose of controlling the rate of penetration of the pile (col. 1 lines 29-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Martin's device with a linear induction motor as taught by Rice for the purpose of controlling the acceleration rate of the ram as a pile is driven.

Regarding claims 28-31, the modified device of Martin discloses the same invention substantially as claimed but is silent about the overall operational height of the

impact driver being less than 3m, 2.5m, 2m, and 1.5m. However, the examiner takes Official Notice that it is well known to form devices with sufficient lengths and heights so as to facilitate use of the device. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to form Martin's modified impact driver at a sufficient height so as to facilitate use of the device.

16. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacquemet (4,799,557) in view of Deike (4,124,081)

Jacquemet discloses the same invention substantially as claimed but is silent about the device being mounted onto a vehicle. However, Deike teaches a post driving machine that is mounted into a vehicle for the purpose of facilitating portability of the device and for providing stability and support as the device is in operation. The post driver can rotate (col. 4 lines 54-59) and translate (Fig. 1) relative to the vehicle for the purpose of facilitating operation of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to rotatably and translatably mount Jacquemet's device on a vehicle for the purpose of facilitating portability and operation and providing stability and support.

17. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (4,844,661) in view of Rice (4,390, 307) as applied to claims 1-17, 19-21, and 27-37 above, and further in view of

Martin's modified device discloses the same invention substantially as claimed but is silent about the device being mounted onto a vehicle. However, Deike teaches a post driving machine that is mounted into a vehicle for the purpose of facilitating

Art Unit: 3721

portability of the device and for providing stability and support as the device is in operation. The post driver can rotate (col. 4 lines 54-59) and translate (Fig. 1) relative to the vehicle for the purpose of facilitating operation of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to rotatably and translatably mount Martin's modified device on a vehicle for the purpose of facilitating portability and operation and providing stability and support.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chen, Barber, Kahl, Jacquemet, Loveless, Durmeyer, and DeMichelis are cited to show similar inventions involving magnetic drivers for driving and lifting rams. Kenney, Campling, Moseley, and Cunningham are cited to show similar inventions for providing additional acceleration to the ram as it falls from its own weight. Kang, Okada, and Denne show inventions for linear induction motors for accelerating an object in a linear path. Tamaki, Schnell, Nimens, Veronelli, Sano, and Wisotsky are cited to show similar inventions involving post drivers mounted on vehicles and vessels. Kuehn, Nelson, and Roger are also cited to show similar inventions.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lindsay M. Low whose telephone number is 571-272-1196. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00.


Art Unit: 3721

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LML

11/21/2007



Rinaldi I. Rada
Supervisory Patent Examiner
Group 3700